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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
(Our Case No. 03-214-A)

In re Application of:

Bao, et al.

Serial No.: 10/789,831

Filed: February 27, 2004

For: Label-Free Gene Expression Profiling With  
Universal Nanoparticle Probes in Microarray  
Assay Format

)  
)  
) Examiner: TBA

)  
) Group Art Unit: TBA

)  
) Confirmation No.: TBA

**TRANSMITTAL LETTER**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In regard to the above identified application.

1. We are transmitting herewith the attached:

- a) Eighth Supplemental Information Disclosure Statement;
- b) U.S. PTO 1449 Form with copies of 22 references; and
- c) Return Postcard.

2. With respect to fees:

- a) No fee is attached.
- b) General Authorization: Please charge any underpayment or credit any overpayment our Deposit Account No. 13-2490.

3. CERTIFICATE OF MAILING UNDER 37 CFR § 1.8: The undersigned hereby certifies that this Transmittal Letter and the paper, as described in paragraph 1 hereinabove, are being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 10th day of August, 2004.

Date:

Aug. 10, 2004

Respectfully submitted,

Emily Miao  
Registration No. 35,285



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(Our Case No. 03-214-A)

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For: Label-Free Gene Expression Profiling	)	Confirmation No.: TBA
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Microarray Assay Format	)	

Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

**EIGHTH SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT**

Sir:

In order to comply with discretionary regulations 37 CFR §§1.97 and 1.98, attached hereto is Form PTO-1449, copies<sup>1</sup> of the documents listed thereon. These documents contain information which the Examiner may consider to be important in deciding whether to allow the present application to issue as a patent.

1. Stec, et al., U.S. Patent No. 5,151,510, issued 09/29/92
2. Mirkin, et al., U.S. Patent No. 6,361,944, issued 03/26/02
3. Mirkin, et al., U.S. Patent No. 6,417,340, issued 07/09/02
4. Mirkin, et al., U.S. Patent No. 6,506,564 B1, issued 01/14/03

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<sup>1</sup>To the extent that a document is listed and no copy of same is attached, then such document is not at the present time available to the undersigned or is available in the file of a parent application. If a listed document is not in the English language and an English translation is readily available, such translation is also attached; if translation is not attached it is not readily available to the undersigned. If a foreign language patent document is cited, and an English language equivalent is known to the undersigned, then such equivalent patent is also cited on the attached form along with the corresponding foreign language patent and a connecting arrow indicated therebetween; if no such English language equivalent is cited, then none is known to undersigned.

5. International Application No. PCT/US97/12783 published 2/5/98
6. International Application No. PCT/US00/17507 published 1/4/01
7. International Application No. PCT/US01/01190 published 7/19/01
8. International Application No. PCT/US02/16382 published 1/30/03
9. International Application No. PCT/US03/14100 published 11/20/03
10. Bassell, et al., "Single mRNAs Visualized by Ultrastructural In Situ Hybridization Are Principally Localized at Actin Filament Intersections in Fibroblasts", *The Journal of Cell Biology*, Vol. 126, No. 4, pp. 863-876 (August 1994)
11. Braun, et al., "DNA-templated assembly and electrode attachment of a conducting silver wire", *Nature*, Vol. 391, p. 775-778 (February 19, 1998)
12. Braun-Howland, et al., "Development of a Rapid Method for Detecting Bacterial Cells *In Situ* Using 16S rRNA-Targeted Probes", *Biotechniques*, Vol. 13, No. 6, pp. 928-932 (1992)
13. Frens, et al., "Controlled Nucleation for the Regulation of the Particle Size in Monodisperse Gold Suspensions", *Nature Physics Science*, Vol. 241, pp. 20-22 (January 1, 1973)
14. Grabar, et al., "Preparation and Characterization of Au Colloid Monolayers", *Anal. Chem.*, Vol. 67, pp. 735-743 (1995)
15. LaPlanche, et al., "Phosphorothioate-modified oligodeoxyribonucleotides. III. NMR and UV spectroscopic studies of R<sub>p</sub>-R<sub>p</sub>, S<sub>p</sub>-S<sub>p</sub>, and R<sub>p</sub>-S<sub>p</sub> duplexes, [d(GG<sub>s</sub>AATTCC)]<sub>2</sub>, derived from diastereomeric O-ethyl phosphorothioates", *Nucleic Acids Research*, Vol. 14, No. 22, pp. 9081-9093 (1986)
16. Letsinger, et al., "Use of a Steroid Cyclic Disulfide Anchor in Constructing Gold Nanoparticle – Oligonucleotide Conjugates", *Bioconjugate Chem.*, Vol. 11, pp. 289-291 (2000)
17. Stec, et al., "Automated Solid-Phase Synthesis, Separation, and Stereochemistry of Phosphorothioate Analogues of Oligodeoxyribonucleotides", *J. Am. Chem. Soc.*, Vol. 106, pp. 6077-6079 (1984)

18. Stein, et al., "Physiochemical properties of phosphorothioate oligodeoxynucleotides", *Nucleic Acids Research*, Vol. 16, No. 8, pp. 3209-3221 (1988)
19. Storhoff, et al., "One-Pot Colorimetric Differentiation of Polynucleotides with Single Base Imperfections Using Gold Nanoparticle Probes", *J. Am. Chem. Soc.*, Vol. 120, pp. 1959-1964 (1998)
20. Uhlmann, et al., "Antisense Oligonucleotides: A New Therapeutic Principle", *Chemical Reviews*, Vol. 90, No. 4, pp. 544-584 (June 1990)
21. Zon, et al., Oligonucleotides and Analogues: A Practical Approach, pp. 87-108, (F. Eckstein, ed.), Oxford University Press, Oxford England
22. Zon, et al., "Phosphorothioate oligonucleotides: chemistry, purification, analysis, scale-up and future directions", *Anti-Cancer Drug Design*, Vol. 6, pp. 539-568 (1991)

In accordance with MPEP Sections 609 and 707.05(b), it is requested that each document cited (including any cited in applicant's specification which is not repeated on the attached Form PTO-1449) be given thorough consideration and that it be cited of record in the prosecution history of the present application by initialing on Form PTO-1449. Such initialing is requested even if the Examiner does not consider a cited document to be sufficiently pertinent to use in a rejection, or otherwise does not consider it to be prior art for any reason, or even if the Examiner does not believe that the guidelines for citation have been fully complied with. This is requested so that each document becomes listed on the face of the patent issuing on the present application.

The present Disclosure Statement is being submitted in compliance with 37 CFR 1.56 insofar as an Examiner might consider any of the cited documents important in deciding whether to allow the application to issue as a patent, but the citation of each

document is not to be construed as an admission that such document is necessarily relevant or prior art. No representation is intended that the cited documents represent the results of a complete search, and it is anticipated that the Examiner, in the normal course of examination, will make an independent search and will determine the best prior art consistent with 37 CFR 1.104(a) and 1.106(b) and, in the course of each search, will review for relevance every document cited on the attached form even if not initialed.

Early and favorable consideration is earnestly solicited.

Respectfully submitted,

Dated: Aug. 10, 2004



Emily Miao  
Registration No. 35,285

**McDonnell Boehnen Hulbert & Berghoff LLP**  
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Form PTO-1449

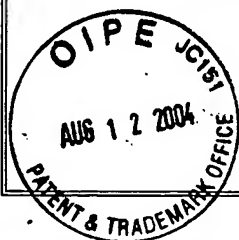
U.S. Department of Commerce  
Patent and Trademark Office

Atty. Docket No.

Serial No.

03-214-A

10/789,831

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

Applicant: Bao, et al.

Filing Date:  
February 27, 2004

Group: TBA

**U.S. PATENT DOCUMENTS**

Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date
	1.	5,151,510	09/29/92	Stec, et al.			
	2.	6,361,944	03/26/02	Mirkin, et al.			
	3.	6,417,340	07/09/02	Mirkin, et al.			
	4.	6,506,564 B1	01/14/03	Mirkin, et al.			

**FOREIGN PATENT DOCUMENTS**

		Document Number	Date	Country	Class	Subclass	<u>Translation</u> Yes No	
	5.	PCT/US97/12783	2/5/98	PCT				
	6.	PCT/US00/17507	1/4/01	PCT				
	7.	PCT/US01/01190	7/19/01	PCT				
	8.	PCT/US02/16382	1/30/03	PCT				
	9.	PCT/US03/14100	11/20/03	PCT				

**OTHER DOCUMENTS - Including Author, Title, Date, Pertinent Pages, Etc.**

	10.	Bassell, et al., "Single mRNAs Visualized by Ultrastructural In Situ Hybridization Are Principally Localized at Actin Filament Intersections in Fibroblasts", <i>The Journal of Cell Biology</i> , Vol. 126, No. 4, pp. 863-876 (August 1994)
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Examiner	Date Considered
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EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with any communication.